

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A communication device, comprising:

a plurality of physical layers of various kinds different from each other;

a plurality of communication state detecting sections for respectively detecting communication states when adopting each of the plurality of physical layers

~~memory means for storing a communication quality level required by a subject application; and~~

physical layer selecting means for determining communication quality levels respectively corresponding to each of the plurality of physical layers according to results of detections by each of the communication state detecting sections and selecting among said plurality of physical layers for each application, a physical layer currently capable of providing communications in ~~the a~~ communication quality level required by ~~the subject~~each application, as a physical layer for the subject application to use in communicating.

2. (Original) The communication device as set forth in claim 1, wherein:

said communication quality level is determined by an effective throughput, a response time, a transmission rate of the physical layer or a receiving radio field intensity.

3. (Previously Presented) The communication device as set forth in claim 1, wherein:

in the case where none of the physical layers is capable of providing communications in the quality level required by the subject application, said physical layer selecting means informs that to the subject application and requests that the subject application lower the required communication quality level.

4. (Original) The communication device as set forth in claim 1, wherein:

said physical layer selecting means determines a current communication state of each of said plurality of physical layers according to a predetermined priority order set beforehand from that of the highest priority if it is capable of providing communications in the communication quality level required by the subject application, and selects the physical layer capable of providing communications in the communication quality level if any.

5. (Previously Presented) The communication device as set forth in claim 1, wherein:

said plurality of physical layers include a physical layer for use in communicating via a radio communication path.

6. (Previously Presented) The communication device as set forth in claim 5, wherein:

said plurality of physical layers include a physical layer which communicates via the radio communication path, using a radio frequency band of either 2.4 GHz band or 5 GHz band.

7. (Original) The communication device as set forth in claim 5, wherein:

at least one of said plurality of physical layers that communicates via the radio communication path is provided with a plurality of antennas, and

when determining a current communication state of each of said plurality of physical layers if it is capable of providing communications in the communication quality level as required by the subject application, said physical layer selecting means switches an antenna among said plurality of antennas in order to obtain respective receiving states, and determines the current communication state of each of said plurality of physical layers based on a receiving state.

8. (Previously Presented) The communication device as set forth in claim 5, further comprising:

a plurality of physical layers which communicate via the radio communication path, wherein

a physical layer, of the plurality of physical layers which communicate via the radio communication path, having a highest radio wave frequency is provided with a mobile antenna having an adjustable installation position.

9. (Previously Presented) The communication device as set forth in claim 5, wherein:

said physical layer that communicates via the radio communication path includes a mobile antenna having an adjustable installation position, and

said communication device further comprising:

stoppage instruction means for temporally stopping the operation of selecting the physical layer by said physical layer selecting means while the installation position of the mobile antenna is being adjusted.

10. (Previously Presented) The communication device as set forth in claim 4, wherein:

said plurality of physical layers include plural physical layers that communicate via a radio communication path, and

the priority order of the physical layers that communicate via the radio communication path is ordered from highest to lowest radio field frequency.

11. (Currently amended) The communication device as set forth in claim 3, wherein:

| said physical layer selecting ~~memory~~ means stores the priority order of said plurality of physical layers independently for each of a plurality of subject applications, and

upon selecting a physical layer for the application to use in communicating, said physical layer selecting means reads out the priority order of the application from the physical layer selecting memory means and selects the physical layer according to the priority order.

12. (Original) The communication device as set forth in claim 1, wherein:

said physical layer selecting means selects a physical layer for the subject application to use in both directions of transmitting and receiving.

13. (Previously Presented) The communication device as set forth in claim 1, wherein:

said physical layer selects the first physical layer for use in transmitting a signal in a transmitting direction or a receiving direction, at least one of said plurality of physical layers communicate via a radio communication path and are provided with a plurality of antennas, and selects from other physical layers than the first physical layer for use in signal transmission in other direction.

14. (Currently amended) The communication device as set forth in claim 1, wherein:

said physical layer selecting memory means stores a transmission method of either full-duplex transmission or half-duplex transmission to be adopted for each application; and

in the case where the stored transmission method for the subject application is a full duplex transmission, said physical layer selecting means selects a physical layer for both transmitting and receiving directions to be used for the application; while, in the case where the transmission method stored for the subject application is a half duplex transmission, said physical layer selecting means selects a physical layer for use in transmitting a signal in either a transmitting direction or a receiving direction which is mainly used, and selects from other physical layer than the physical layer for use in transmitting a signal in the mainly used direction, for use in transmitting a signal in the other direction.

15. (Previously Presented) The communication device as set forth in claim 1, wherein:

said physical layer selecting means is provided with physical layer fixing means which controls said physical layer selecting means to select a predetermined physical layer for the subjection application to use in communicating, irrespective of a communication state.

16. (Previously Presented) The communication device as set forth in claim 15, wherein:

said physical layer fixing means controls said physical layer selecting means to select the predetermined physical layer only when the subject application does not require a band grantee.

17. (Original) The communication device as set forth in claim 1, wherein:

in the case where the subject application starts communicating with a second correspondent different from a first correspondent which is a current correspondent of the subject application, said physical layer selecting means selects from said plurality of physical layers, a physical layer not in use by the subject application, as a physical layer for use in communicating with the second correspondent.

18. (Original) The communication device as set forth in claim 17, wherein:

in the case where the physical layer as selected for use in communicating with the second correspondent cannot be used, said physical layer selecting means selects the physical layer in use for communicating with the first correspondent to be used in common between the first correspondent and the second correspondent.

19. (Previously Presented) The communication device as set forth in claim 13, wherein:

in the case where the subject application starts communicating with a second correspondent different from a first correspondent to which the subject application is communicating, said physical layer selecting means selects between the first physical layer in use by the subject application and the second physical layer, the second physical layer to be used by both of said first correspondent and said second correspondent.

20. (Previously Presented) The communication device as set forth in claim 19, wherein:

in the case where the physical layer as selected for use in communicating with the second correspondent cannot be used, said physical layer selecting means selects the first physical layer to be used by both of the first correspondent and the second correspondent.

21. (Original) The communication device as set forth in claim 1, further comprising:

communication state presenting means which presents a communication state of each of said plurality of layers.

22. (Original) The communication device as set forth in claim 5, further comprising:

communication state presenting means which presents a communication state of each of said plurality of layers.

23. (Previously Presented) The communication device as set forth in claim 21, further comprising:

a plurality of subject applications, wherein

said communication state presenting means presents whether a communication state of each physical layer is capable of providing communications in the communication quality level required by each application.

24. (Original) The communication device as set forth in claim 21, wherein:

communication state presenting means presents not only the communication state of each of said plurality of physical layers but also the physical layer being selected by said physical layer selecting means.

25. (Previously Presented) The communication device as set forth in claim 21, wherein:

communication state presenting means presents said communication state in a display together with said subject application.

26. (Original) The communication device as set forth in claim 1, wherein:

said communication device is a video receiving device or a video storage device.

27. (Original) The communication device as set forth in claim 1, wherein:

said communication device is a video transmitting device.

28. (Canceled)

29. (Currently amended) A machine-readable recording-medium having instructions stored thereon, such that when the instructions are read and executed by a processor, the processor is configured to storing a program which makes a computer operate as:

a plurality of communication state detecting sections for respectively detecting communication states when adopting each of the plurality of physical layers, the plurality of physical layers being of various kinds different from each other;

and

physical layer selecting means for determining communication quality levels respectively corresponding to each of the plurality of physical layers according to results of detections by each of the communication state detecting sections and selecting among said plurality of physical layers for each application, a physical layer currently capable of providing communications in the a communication quality level required by each application, as a physical layer for the subject application to use in communicating

~~memory means for storing a communication quality level required by a subject application; and~~

~~—— physical layer selecting means for selecting among said plurality of physical layers, a physical layer currently capable of providing communications in the communication quality level required by the subject application, as a physical layer for the subject application to use in communicating.~~

30. (New) The communication device as set forth in claim 1, wherein,

the physical layer selecting means selects different physical layers for a first application and a second application, or

in a case where a link is not established or there is no other physical layer, except a physical layer for the first application, capable of providing a communication quality level required by the second application, the physical layer selecting means performs selection such that the first and the second applications share a same physical layer.

31. (New) A communication method, comprising:

respectively detecting communication states when adopting each of a plurality of physical layers;

determining communication quality levels respectively corresponding to each of the plurality of physical layers according to results of detections; and

selecting among said plurality of physical layers for each application, a physical layer currently capable of providing communications in a communication quality level required by each application, as a physical layer for the subject application to use in communicating.